

**Amendments to the Claims:** This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

PATENT CLAIMS

We claim:

1. (Currently Amended) A circuit ~~Circuit~~—for producing said—galvanically separated synchronization impulses (sync) from an AC mains,  
characterized in that  
wherein  
the line voltage rectified by means of a said—half-wave rectifier—(D1), lies on a said voltage divider (R1, R2)—for the switching input of a said—semiconductor switch—(T1), and the saidan emitting diode of a saidan optocoupler (OKO)—lies in the aworking branch, whereby the working branch has, in series with the said emitting diode (D0)—a said drop resistor—(R3), via which a said—storage capacitor (C2)—can be periodically charged and can be discharged via the said emitting diode (D0), and at least one said—transistor (T2, T3)—is arranged downstream of the said receiving element (E0)—of the said optocoupler (OKO), which is fed by a said—voltage source (Ub)—that is galvanically separated from the line voltage and in whose load branch the—essentially rectangular synchronization impulses (sync) are available.
  
2. (Currently amended) ~~Circuit~~—The circuit in accordance with claim 1, characterized in that wherein the semiconductor switch is a said—transistor—(T1).
  
3. (Currently amended) ~~Circuit~~—The circuit in accordance with claim 1 or 2, characterized in that, wherein a said—voltage-limiting Zener diode (D2)—lies parallel to the said—storage capacitor—(C2).
  
4. (Currently amended) ~~Circuit~~—The circuit in accordance with one of the claims—claim 1 through 3, characterized in that, wherein the series connection of the said—drop resistor (R3), the said—emitting diode (D0)—and a said—current-limiting resistor (R4)—lies in the working branch of the said—switch—(T1), whereby the said—storage capacitor (C2) lies

parallel to the emitting diode-current-limiting resistor-switching junction series connection.

5. (Currently amended) ~~Circuit~~ The circuit in accordance with claim 4, characterized in thatwherein a said-resistor (R5) lies parallel to the said-emitting diode (D0) for defining the potential.
6. (Currently amended) ~~Circuit~~ The circuit in accordance with one of the claims 1 through 5, characterized in thatclaim 1, wherein a said-filter capacitor (C1) lies parallel to a said resistor (R2) of the input voltage divider, which lies parallel to the base emitter junction of the said-input transistor (T1).
7. (Currently amended) ~~The circuit~~ Circuit in accordance with one of the claims 1 through 6, characterized in thatclaim 1, wherein the said-transistor (T2) arranged downstream of the said-receiving element (E0) is a Darlington transistor.
8. (Currently amended) ~~Circuit~~ The circuit in accordance with one of the claims 1 through 7, characterized in thatclaim 1, wherein another said-transistor (T3) for phase reversal is arranged downstream of the said-transistor (T2), which is arranged downstream of the said-receiving element (E0) of the said-optocoupler (OKO), whereby the synchronization impulses are available at the said-working resistor (R8).
9. (New) The circuit in accordance with claim 2, wherein a voltage-limiting Zener diode lies parallel to the storage capacitor.
10. (New) The circuit in accordance with claim 2, wherein the series connection of the protective resistor, the emitting diode and a current-limiting resistor lies in the working range of the switch, whereby the storage capacitor lies parallel to an emitting diode-current-limiting resistor-switching junction series connection.

11. (New) The circuit accordance with claim 3, wherein the series connection of the protective resistor, the emitting diode and a current-limiting resistor lies in the working range of the switch, whereby the storage capacitor lies parallel to an emitting diode-current-limiting resistor-switching junction series connection.
  
12. (New) The circuit in accordance with claim 2, wherein a filter capacitor lies parallel to a resistor of the input voltage divider, which lies parallel to a base emitter junction of the input transistor.